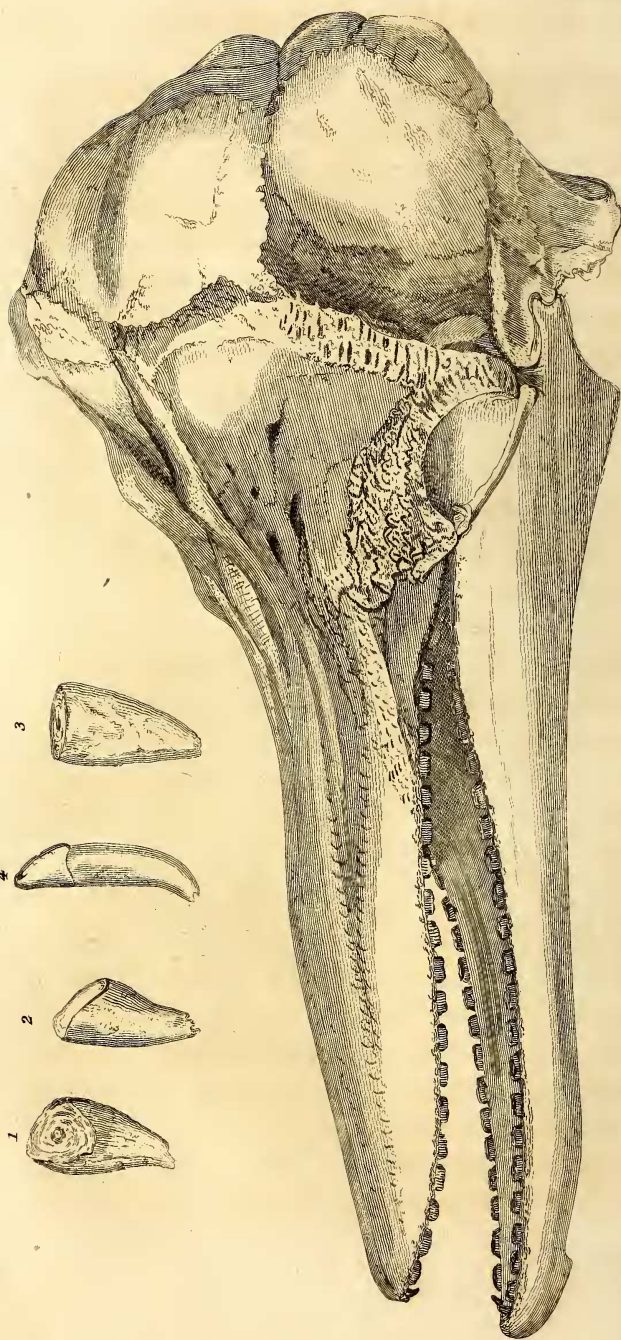




HEAD OF DELPHINUS TRUNCATUS.

Fig.^s 1.2.3. Teeth belonging to different parts of the Jaws. Nat.^l size.
1.&2 different views of the same Teeth.

III. *Description of a Species of Delphinus, which appears to be new.*

By the late GEORGE MONTAGU, Esq. F. L. S. & M. W. S.

(Read 20th March 1815.)

DELPHINUS Truncatus,

With numerous Teeth, closely connected, truncated, and on a level with the gums: In form resembling the Dolphin.

IN the summer of the year 1814, a cetaceous animal was exhibited as a show at Totness, which I was informed belonged to the genus *Delphinus*, but that it possessed some characters which did not appear to belong to any of the species hitherto known.

As I did not hear of the circumstance till after the animal had been boiled for obtaining its oil, I could only endeavour to collect the best information concerning it, and, if possible, obtain its jaws, in which its principal distinction from *Delphinus delphis* appeared to consist. The first information of the capture of this animal, I received from Mr Dyer of Totness, and afterwards a more detailed account of the capture and description of the ani-

mal from Mr James Cornish of the same place. From the very great resemblance the animal bore to *Delphinus delphis* in its form, situation and shape of its fins, it was generally considered as that species; but Mr Cornish very properly doubted it, from the very different appearance the teeth exhibited from what the dolphin is described to possess. Mr Cornish describes it to be twelve feet in length, and about eight feet in circumference in the largest part; the colour of the back black, with a purplish tinge, gradually becoming dusky on the sides, and sullied white on the belly; the spiracle or blow-hole was placed between the eyes, it was semi-oval with the convexity forwards, and was two inches in length; its distance from the point of the snout, fourteen inches and a half. But the remarkable part of Mr Cornish's observation was, that the teeth were numerous in each jaw, placed close together, with their surfaces circular, perfectly flat and even with the gums. For a good representation of the contour of the animal, I was referred to the figure of the Dolphin in Shaw's Lectures.

Being extremely anxious to examine any remains of the head that could be obtained, Mr Cornish undertook to recover it, if possible, from the Dart, into which river the bones of the animal had been thrown after boiling; and I am happy to say, that after the indefatigable research of that gentleman, by dragging the river, the skull, with the connected upper jaw, and also the lower jaw, were the fruits

of his labour, both of which he obligingly sent to me, accompanied by some teeth *.

The possession of the head is of considerable interest to science, as it obviates all doubt as to the accuracy of the relation given some time after the examination of the subject. The appearance of this part fully confirms what has already been said of it.

The length of the skull, including the upper jaw, is twenty inches and a half; the breadth of the jaw across the hinder teeth, is nearly five inches; on each side there are sockets for twenty teeth, besides a long depression behind the posterior socket, for some other purpose. The under jaw is somewhat longer, containing twenty-three sockets on each side, making collectively in both jaws eighty-six teeth, a number little inferior to what has hitherto been noticed in any cetaceous animal described †.

The sockets are variable in size, without order, shewing that some teeth were double the size of others, and the approximation of the sockets evinces

* The teeth of the animal had been all knocked out to satisfy the curiosity of the spectators, when it was exhibited as a show; and were so distributed, as to render it difficult to obtain many.

† The Delphis is said to have from 88 to 112. The Phocæna about 96 at the utmost. The Orca about 60, some only 50. In a specimen in the French Museum, each jaw had 22; but Artedi enumerates 40 in the lower jaw.

the contiguity of the teeth, so that the teeth of both jaws must have opposed their surfaces to each other, there being no intermediate space, as described in the Grampus and Dolphin, for the reception of the teeth of the opposite jaw. All the teeth I have examined, except one, have nearly a flat surface, some a little sloping or obliquely truncated, and quite flat; others truncated at right angles, and slightly convex, and one, not half so large as any other, is obtusely conic; this appears from the corresponding sockets to have been a fore-tooth; for in the upper jaw there are two small sockets in the front, and in the lower jaw four; but even these could scarcely protrude beyond the flesh, as not above a quarter of an inch projects above the jaw-bone when placed in the socket. The hinder teeth appear to have stood nearly perpendicular; others evidently stood obliquely forwards, both by the appearance of the teeth and the sockets; and I am of opinion, that none of the teeth, the six smaller ones before mentioned excepted, could have been scarcely elevated above the gums, both by the appearance of the teeth themselves, and by replacing them in their sockets.

The blow-hole in the skull is situated as described by Mr Cornish, but a central septum or longitudinal division, cuts the aperture into two equal parts.

By comparing the number, disposition and shape of the teeth of this species, with those of the gram-

pus, the porpesse, and the dolphin, the dissimilarity is so great, that there is no hesitation in deciding the distinction; all those animals being furnished with teeth more or less sharp or conic, projecting above the gums, and sufficiently distant, to admit those of the opposite jaw to lock in between them, when the mouth is closed*. In the *Delphinus gladiator*, (described by La Cepede in his *Histoire des Cétacées*, from a specimen taken in the Thames in the year 1793, said to have been communicated by Sir Joseph Banks, accompanied by a drawing, and lately introduced into the British Fauna, in the last edition of Pennant's *British Zoology*,) the snout is said to be short, and the teeth sharp; so that any further comparison with this species would be useless to mark a distinction.

Another species of *Delphinus* is mentioned by Dr Shaw in his *General Zoology*, by the title of *rostratus*, the jaws of which appear to be the only parts that have come under examination. All we obtain from the description, is, that the jaws are extremely narrow in proportion to their length, which is about two feet, and that the teeth are small, not numerous, distant, and shaped like the molares of quadrupeds. From this very imperfect description, nothing decisive can be drawn, except that the atte-

* So described by most authors, but there is some confusion about the distance of the teeth. I have seen an instance of the porpesse, where the teeth could not intersect each other.

nuated snout and truncated teeth, are similar characters to those related of the present species; but the teeth being distant and not numerous, cannot belong to the present subject. The teeth of the delphinus in question, have a perfectly smooth surface, not irregular, as in the molares of quadrupeds; they are, indeed, formed with annular marks or faint concentric circles, which are only apparent when closely examined, the central one excepted.

Upon the whole, I do not find any species of delphinus described, to which this has sufficient affinity to induce a reference; and therefore trust it will be found to be a nondescript species. It must, however, be observed, that I have not been able to consult Cuvier's dissertation on this tribe of animals.

The *Delphinus truncatus* was captured on the 3d of July 1814, in Duncannon Pool, near Stoke Gabriel, about five miles up the river Dart. It was killed with great difficulty, resisting the efforts of eight men with spears and guns, assisted by dogs, from nine in the morning till one in the afternoon, when, being partly exhausted by the loss of blood, it was secured in a net, and, after receiving another shot, its throat was cut. When wounded, it made a bellowing like a bull.

I cannot conclude this subject without noticing, that there does not appear to be the least similitude between this species and the *ca'ing whale* of the Orkneys, originally described by Mr Neill in his Tour through the Orkney and Shetland islands;

and since described and figured by Dr Traill of Liverpool, in Nicholson's Journal, vol. xxii. No. 97. under the title of *Delphinus melas*. The remarkable length of the pectoral fins or swimming paws of the *Delphinus melas*, being above one-third the length of the whole animal, is sufficient to separate it from all those hitherto described*. It is worthy of remark, that amongst a great many of *Delphinus melas*, that were stranded at the same time, the young as well as some of the largest were destitute of teeth. From this and other observations made by different naturalists, there should appear to be no criterion of species by the number and situation of teeth. If we are well informed, the generic characters of *Physeter* and *Delphinus* do not hold good; and, in fact, these should form but one genus. Fabricius and others have declared, that the former have small teeth in the upper-jaw, obscured by the flesh. It has also been said, that some species of *Delphinus* have been observed

* There is little doubt of this *Delphinus* being the same as is described and figured in Cuvier's dissertation on the French species of *Delphinus*, under the title of *Globiceps*. The rounded front, and slender pectoral fins, are pretty evident characters; but the latter are not sufficiently long in the figure. To Dr Leach I am obliged for outlines of the several *Delphini* figured by Cuvier, by whom, I understand, no mention is made of their teeth; but none of the figures correspond with that of the subject of this paper.

with teeth in one jaw only. In fact, this class of mammalia appears to be in great obscurity. Few naturalists have the means of examining many species; and, therefore, their writings are borrowed mostly from old and imperfect descriptions. Even the more common species of *Delphinus*, the *Orca*, *Phocæna** and *Delphis*, are by no means sufficiently defined to admit of our deciding, that there are not some very nearly allied species confounded with them,—a consideration worth the attention of such naturalists as may frequently have the means of examination and comparison of the species.

* How shall we account for the reversed form of the dorsal fin of the porpesse, originally figured by Jago, and afterwards copied into Borlas's History of Cornwall? Surely this must be one of the innumerable errors handed down to us from the infancy of science.